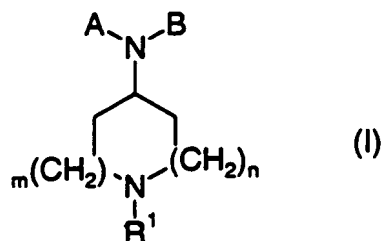


Claims

1. A compound of the formula (I)



wherein

m is 0 or 1;

n is 1 or 2;

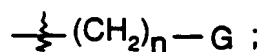
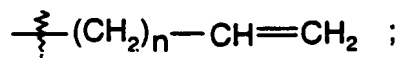
R¹ is selected from

hydrogen;

a branched or straight C₁-C₆ alkyl;

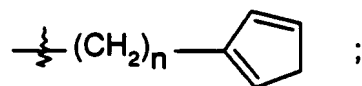
C₃-C₈ cycloalkyl;

- 15 C₄-C₈(alkyl-cycloalkyl) wherein alkyl is C₁-C₂ alkyl and cycloalkyl is C₃-C₆ cycloalkyl;
benzyl;



where G is a hydroaromatic or a heteroaromatic group having 5 or 6 atoms, and where the

- 20 heteroatoms are selected from O, S and N; and

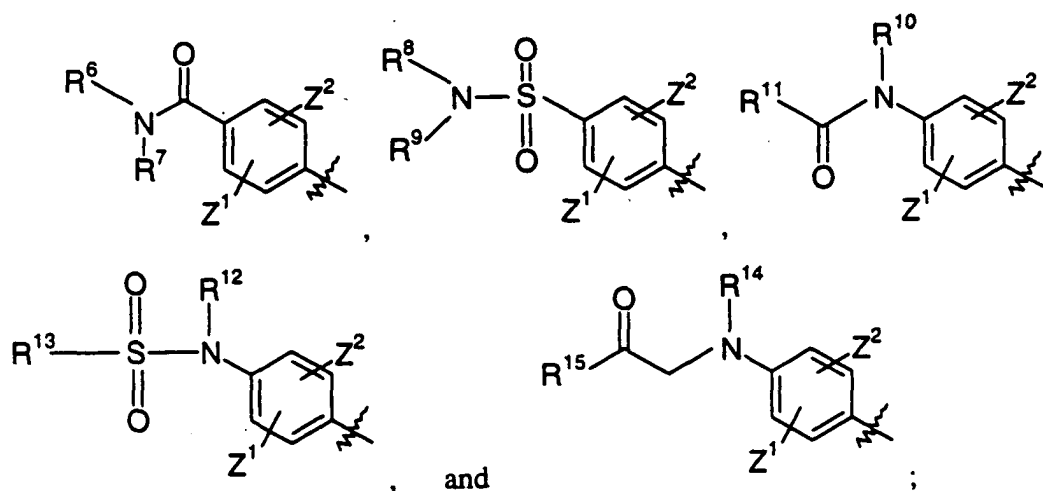


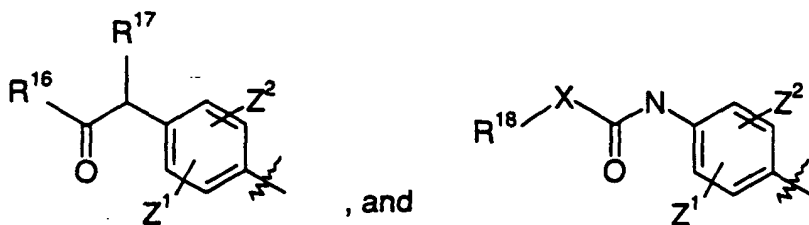
and wherein n = 0 or 1;

C_6-C_{10} aryl; or heteroaryl having from 5 to 10 atoms selected from any of C, S, N and O; wherein the aryl and heteroaryl may optionally and independently be substituted by 1 or 2 substituents independently selected from any of hydrogen, CH_3 , $(CH_2)_pCF_3$, halogen, $CONR^5R^4$, $COOR^5$, COR^5 , $(CH_2)_pNR^5R^4$, $(CH_2)_pCH_3(CH_2)_pSOR^5R^4$, $(CH_2)_pSO_2R^5$, and $(CH_2)_pSO_2NR^5$, wherein R^4 and R^5 is each and independently as defined for R^1 above and p is 0, 1 or 2;

$(C_1-C_2 \text{ alkyl})-(C_6-C_{10} \text{ aryl})$; or $(C_1-C_2 \text{ alkyl})\text{heteroaryl}$, the heteroaryl moieties having from 5 to 10 atoms selected from any of C, S, N and O, and where the aryl or heteroaryl may optionally and independently be substituted by 1 or 2 substituents independently selected from any of hydrogen, CH_3 , $CONR^5R^4$, $COOR^5$, COR^5 , $(CH_2)_qNR^5R^4$, $(CH_2)_qCH_3(CH_2)_qSOR^5R^4$, $(CH_2)_qSO_2R^5$, $(CH_2)_qSO_2NR^5$, and $(CH_2)_qOR^4$, wherein R^4 and R^5 is each and independently as defined for R^1 above and q is 0, 1 or 2;

15 A is





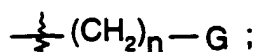
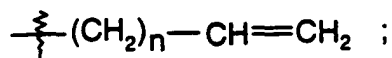
wherein $R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15}, R^{16}, R^{17}$, and R^{18} is each and independently as defined for R^1 above and wherein the phenyl ring of each A substituent may be optionally and independently substituted by 1 or 2 substituents Z^1 and Z^2 which are
 5 each and independently selected from hydrogen, CH_3 , $(CH_2)_rCF_3$, halogen, $CONR^2R^3$, CO_2R^2 , COR^2 , $(CH_2)_rNR^2R^3$, $(CH_2)_rCH_3(CH_2)_rSOR^2$, $(CH_2)_rSO_2R^2$ and $(CH_2)_rSO_2NR^2R^3$ wherein R^2 and R^3 is each and independently as defined for R^1 above and wherein r is 0, 1, or 2; X is O, S or NR^{19} where R^{19} is as defined for R^1 ,

10 B is a substituted or unsubstituted aromatic, heteroaromatic, hydroaromatic or heterohydroaromatic moiety having from 5 to 10 atoms selected from any of C, S, N and O, optionally and independently substituted by 1 or 2 substituents independently selected from hydrogen, CH_3 , $(CH_2)_tCF_3$, halogen, $(CH_2)_tCONR^5R^4$, $(CH_2)_tNR^5R^4$, $(CH_2)_tCOR^5$, $(CH_2)_tCOOR^5$, OR^5 , $(CH_2)_tSOR^5$, $(CH_2)_tSO_2R^5$, and $(CH_2)_tSO_2NR^5R^4$, wherein R^4 and R^5 is each and independently as defined for R^1 ; and t is 0, 1, 2 or 3;

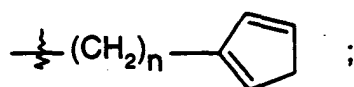
as well as pharmaceutically acceptable salts of the compounds of the formula (I), and isomers, hydrates, isoforms and prodrugs thereof.

2. A compound according to claim 1, wherein

R^1 is selected from benzyl;

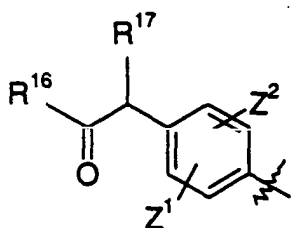
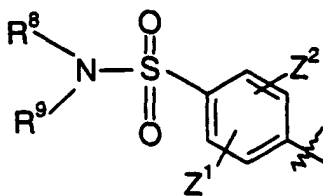
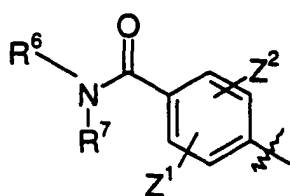


where G is a hydroaromatic or a heteroaromatic group having 5 or 6 atoms, and where the heteroatoms are selected from O, S and N; and

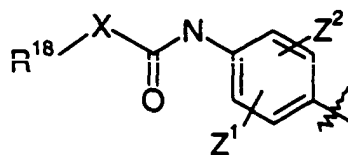


and wherein $n = 0$ or 1 ;

A is selected from anyone of



, and



wherein $R^6, R^7, R^8, R^9, R^{16}, R^{17}$ and R^{18} is each and independently as defined for R^1 above; and Z^1, Z^2 and X is each and independently as defined above;

B is selected from phenyl, naphthyl, indolyl, benzofuranyl, dihydrobenzofuranyl,

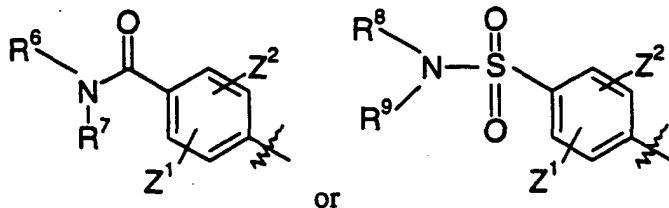
benzothiophenyl, pyrrol, furanyl, quinoliny, isoquinoliny, cyclohexyl, cyclohexenyl,

- cyclopentyl, cyclopentenyl, indanyl, indenyl, tetrahydronaphthyl, tetrahydroquinyl, tetrahydroisoquinolyl, tetrahydrofuranyl, pyrrolidinyl, and indazolyl, each optionally and independently substituted by 1 or 2 substituents independently selected from hydrogen, CH_3 , CF_3 , halogen, $-(\text{CH}_2)_t\text{CONR}^5\text{R}^4$, $-(\text{CH}_2)_t\text{NR}^5\text{R}^4$, $-(\text{CH}_2)_t\text{COR}^5$, $-(\text{CH}_2)_t\text{CO}_2\text{R}^5$, and $-\text{OR}^5$,
 5 $-(\text{CH}_2)_t\text{COR}^5$, $-(\text{CH}_2)_t\text{CO}_2\text{R}^5$, and $-\text{OR}^5$,
 wherein t is 0 or 1, and wherein R^4 and R^5 are as defined for R^1 .

3. A compound according to claim 2, wherein

- 10 R^1 is (C_1 - C_2 alkyl)phenyl and hydrogen;

A is

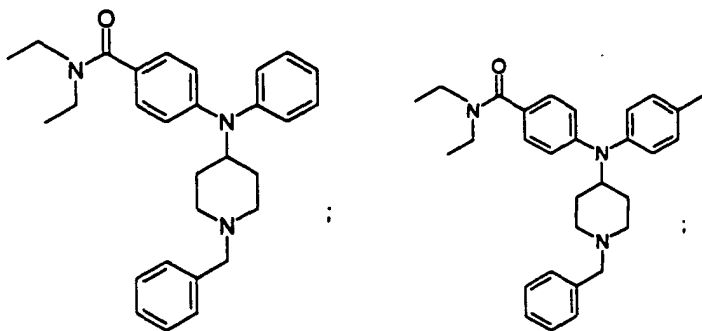


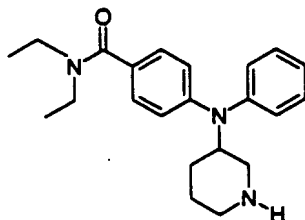
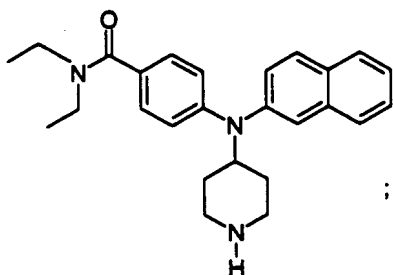
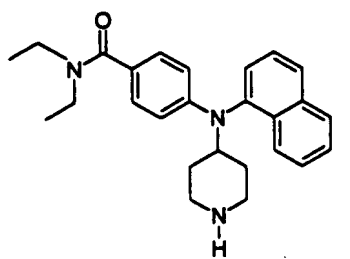
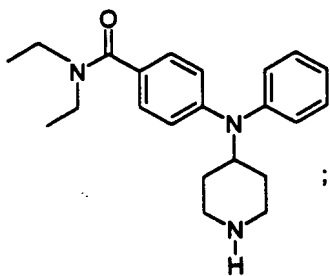
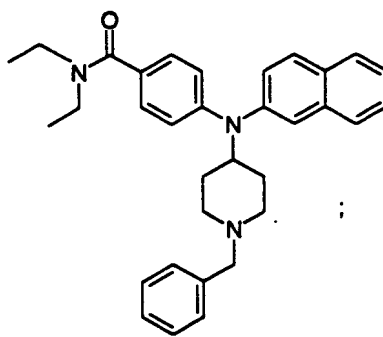
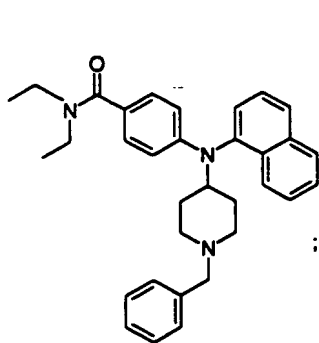
wherein R^6 , R^7 , R^8 , R^9 , is each an ethylene group; and Z^1 and Z^2 , are as defined above;

- 15 B is phenyl or naphthalene; and
 m and n is each 1, or m is 1 and n is 0.

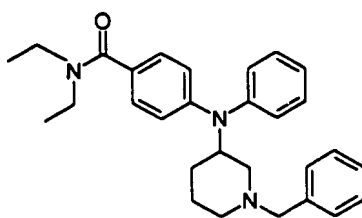
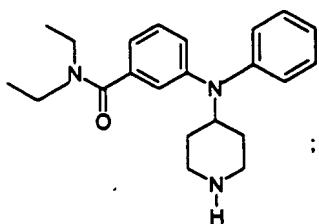
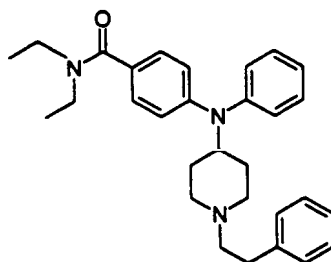
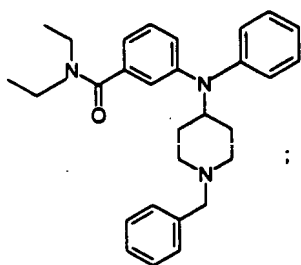
4. A compound according to formula (I) of claim 1, selected from anyone of

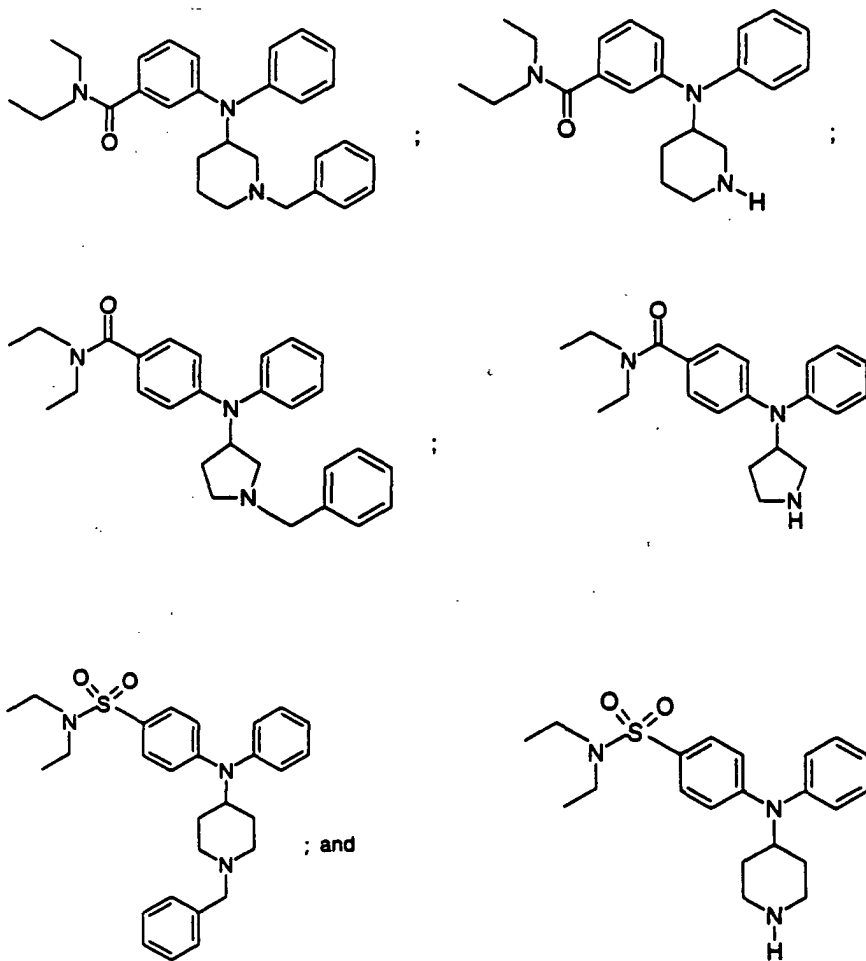
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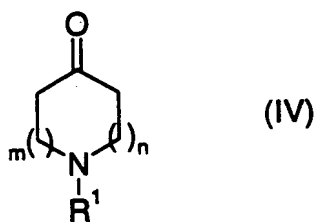


- 10 5. A compound according to any of the preceding claims, in form of its hydrochloride, bitartrate or trifluoroacetate salt.
6. A compound according to any of the previous claims, for use in therapy.
- 15 7. A compound according to claim 6, wherein the therapy is pain management.
8. A compound according to claim 6, wherein the therapy is directed towards gastrointestinal disorders.

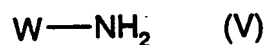
9. A compound according to claim 6, wherein the therapy is directed towards spinal injuries.
- 5 10. A compound according to claim 6, wherein the therapy is directed to disorders of the sympathetic nervous system.
11. Use of a compound according to formula (I) of claim 1 for the manufacture of a medicament for use in the treatment of pain.
- 10 12. Use of a compound according to formula (I) of claim 1 for the manufacture of a medicament for use in the treatment of gastrointestinal disorders.
13. Use of a compound according to formula (I) of claim 1 for the manufacture of a medicament for use in the treatment of spinal injuries.
- 15 14. A compound according to any of claims 1-5, further characterised in that it is isotopically labelled.
- 20 15. Use of a compound according to claim 14 as a diagnostic agent.
16. An isotopically labelled compound of the formula (I) of claim 1.
17. A diagnostic agent comprising a compound of the formula (I) of claim 1.
- 25 18. A pharmaceutical composition comprising a compound of the formula (I) according to claim 1 as an active ingredient, together with a pharmacologically and pharmaceutically acceptable carrier.

19. A process for the preparation of a compound of the formula (I) according to claim 1, whereby

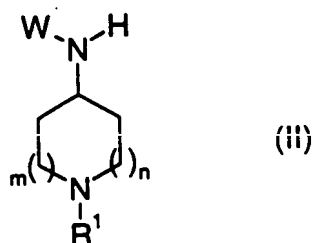
(i) a ketone of the formula (IV)



wherein R^1 , m and n are as defined in formula (I) of claim 1, is subjected to reductive amination with a substituted arylamine of the formula (V)



wherein W is as defined in formula (I) of claim 1, optionally in the presence of a solvent, giving a compound of the formula (II)



wherein R^1 , m and n are as defined in formula (I) above, and W is A or B as defined in formula (I) above;

(ii) R^1 and W in formula (II), are optionally modified after or during preparation of (II) from (IV) and (V);

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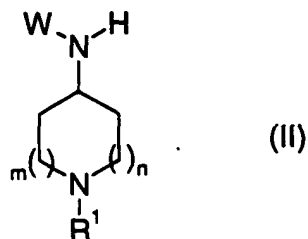
(iii) the compound of the formula (II) achieved in step (i), is subjected to an arylation reaction, by reaction with an arylating agent of the formula (III)



wherein W is A or B as defined in formula (I) above, and Z is a suitable substituent, optionally in the presence of a catalyst, giving a compound of the formula (I) of claim 1; and

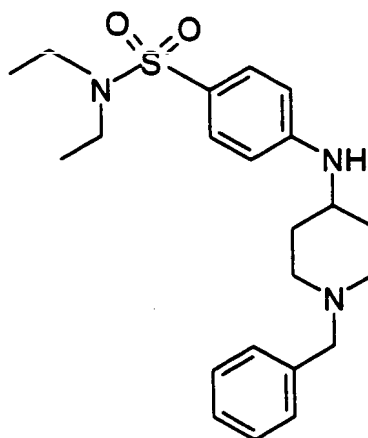
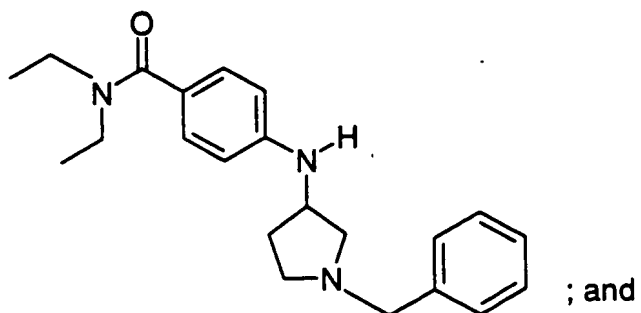
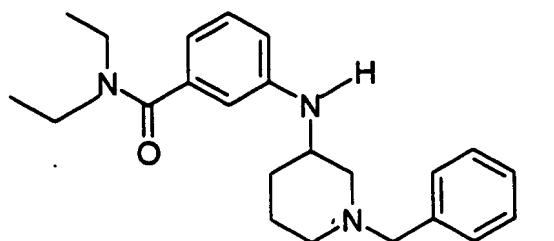
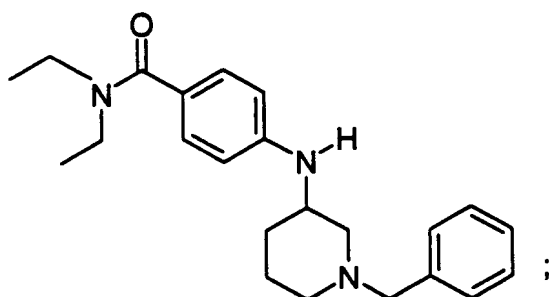
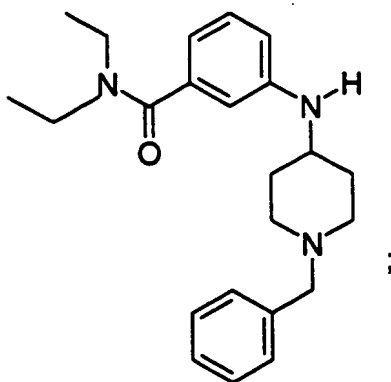
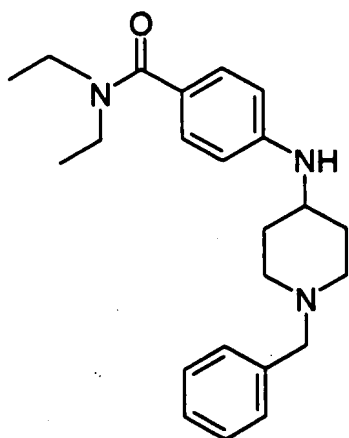
(iv) R^1 , and the substituents on A and B, are optionally further modified.

20. A compound of the formula



wherein R^1 , m and n are as defined in formula (I) of claim 1, and W is as defined for A or B in formula (I) of claim 1.

21. A compound of the formula (II) of claim 17, selected from any of



; and

22. A method for the treatment of pain, whereby an effective amount of a compound of the formula (I) according to claim 1 is administered to a subject in need of pain management.

5 23. A method for the treatment of gastrointestinal disorders, whereby an effective amount of a compound of the formula (I) according to claim 1, is administered to a subject suffering from said gastrointestinal disorder.

10 24. A method for the treatment of spinal injuries, whereby an effective amount of a compound of the formula (I) according to claim 1, is administered to a subject suffering from said spinal injury.